



TRANSPORTATION CABINET

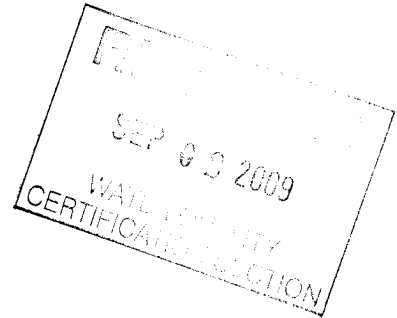
Frankfort, Kentucky 40622
www.transportation.ky.gov/

Steven L. Beshear
Governor

Joseph W. Prather
Secretary

August 26, 2009

Kentucky Division of Water
ATTN: Jesse Robinson
14 Reilly Road
Frankfort, Kentucky 40601



SUBJECT: Request for Water Quality Certification
Pike County, KYTC Item No. 12-1076.00 & 12-1089.00
Bridge Replacements on KY-199

Dear Mr. Robinson:

Submitted is a request for Water Quality Certification. It is anticipated that both KYTC projects will be "let" to construction together because of their close proximity. Each site involves the replacement of a bridge over Pond Creek. The upper bridge (12-1089.00) will also involve the construction of retaining walls along Pond Creek to address the failing roadway and stream bank. The lower bridge (12-1076.00) involves the relocation of 450 feet of Pond Creek, necessary for the elimination of a sharp curve on KY-199. The KYTC proposes an in-lieu fee payment for any required mitigation.

Enclosed is a completed application, location map, mitigation discussion and drawings of the impact areas. If you have any questions or need additional information, please contact me at (502) 564-7250 or by email at: ronb.rigneyii@ky.gov

Sincerely,

Ronald B. Rigney, II
Permits Coordinator
Division of Environmental Analysis



COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES & ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
DIVISION OF WATER

APPLICATION FOR PERMIT TO CONSTRUCT ACROSS OR ALONG A STREAM
AND / OR WATER QUALITY CERTIFICATION

Chapter 151 of the Kentucky Revised Statutes requires approval from the Division of Water prior to any construction or other activity in or along a stream that could in any way obstruct flood flows or adversely impact water quality. If the project involves work in a stream, such as bank stabilization, dredging or relocation, you will also need to obtain a 401 Water Quality Certification (WQC) from the Division of Water. This completed form will be forwarded to the Water Quality Branch for WQC processing. The project may not start until all necessary approvals are received from the KDOW. For questions concerning the WQC process, contact John Dovak at 502/564-3410.

If the project will disturb more than 1 acre of soil, you will also need to complete the attached Notice of Intent for Storm Water Discharges, and return both forms to the Floodplain management Section of the KDOW. This general permit will require you to create and implement an erosion control plan for the project.

1. OWNER: Kentucky Transportation Cabinet
Give name of person(s), company, governmental unit, or other owner of proposed project.
MAILING ADDRESS: 200 Mero Street, 6th Floor
Frankfort, KY 40622
TELEPHONE #: 502-564-3130 EMAIL: ronb.rigneyii@ky.gov
2. AGENT: Dave Harmon, Branch Manager, Division of Environmental Analysis
Give name of person(s) submitting application, if other than owner.
ADDRESS: 200 Mero Street, 5th Floor
Frankfort, KY 40622
TELEPHONE #: 502-564-7250 EMAIL: _____
3. ENGINEER: _____ P. E. NUMBER _____
Contact Division of Water if waiver can be granted
TELEPHONE #: _____ EMAIL: _____
4. DESCRIPTION OF CONSTRUCTION: This project involves the replacement of two bridges on KY 199 near the
Describe the type and purpose of construction and describe stream impact
community of Pinsonfork. The new unstream bridge (Sta. 53+77) clear spans the stream, and require retaining walls along
the left descending bank (total length of approx. 272') due to roadway/streambank failures, and the extension of an existing
culvert. The downstream bridge (Sta. 404+23) also clear spans the stream, but requires a 450' channel change on Pond Creek.
5. COUNTY: Pike NEAREST COMMUNITY: Pinsonfork
6. USGS QUAD NAME: Belfry LATITUDE/LONGITUDE: N37-33-55, W82-15-51 (downstream)
7. STREAM NAME: Pond Creek WATERSHED SIZE (in acres): 5619 (at downstream bridge)
8. LINEAR FEET OF STREAM IMPACTED: Upstream bridge= 362' (LB), 140' (RB), downstream bridge= 450'
9. DIRECTIONS TO SITE: From Pikeville (Pike Co.), travel east on US119 to the community of Huddy, and KY199. Travel
south on KY199 for approximately 2.8 miles to the first bridge (Item No. 12-1076). Continue for another 0.4 miles to the
second bridge (Item No. 12-1089). Both bridges will cross Pond Creek.

10. IS ANY PORTION OF THE REQUESTED PROJECT NOW COMPLETE? ☐ Yes ☒ No If yes, identify the completed portion on the drawings you submit and indicate the date activity was completed. DATE _____
11. ESTIMATED BEGIN CONSTRUCTION DATE: _____ Spring 2010
12. ESTIMATED END CONSTRUCTION DATE: _____ Spring 2011
13. HAS A PERMIT BEEN RECEIVED FROM THE US ARMY CORPS OF ENGINEERS? ☐ Yes ☒ No If yes, attach a copy of that permit. (application has been submitted)
14. THE APPLICANT MUST ADDRESS PUBLIC NOTICE
- (a) _____ Public notice in newspaper having greatest circulation in area (provide newspaper clipping or affidavit)
_____ Adjacent property owner(s) affidavits (Contact Division of Water for requirements.)
- (b) ☒ I REQUEST WAIVER OF PUBLIC NOTICE BECAUSE:
Exempt from floodplain permit and notice (per KRS 151)
Contact Division of Water for Requirements.
15. I HAVE CONTACTED THE FOLLOWING CITY OR COUNTY OFFICIALS CONCERNING THIS PROJECT:
N/A
Give name and title of person(s) contacted and provide copy of any approval city or county may have issued.
16. LIST OF ATTACHMENTS: Vicinity map, plans and cross-sections of impact areas, mitigation discussion and List plans, profiles, or other drawings and data submitted. Attach a copy of a 7.5 minute USGS topographic map clearly showing the project location.
in-lieu fee calculations, stream assessment sheets and photographs.
17. I, _____ (owner) CERTIFY THAT THE OWNER OWNS OR HAS EASEMENT RIGHTS ON ALL PROPERTY ON WHICH THIS PROJECT WILL BE LOCATED OR ON WHICH RELATED CONSTRUCTION WILL OCCUR (for dams, this includes the area that would be impounded during the design flood).
18. REMARKS: The piers and deck for the old railroad bridge (Item No. 12-1076.00) were washed out during a recent flood (emergency work was required to clear stream and banks).

I hereby request approval for construction across or along a stream as described in this application and any accompanying documents. To the best of my knowledge, all the information provided is true and correct.

SIGNATURE: _____

Owner or Agent sign here. (If signed by Agent, a Power of Attorney should be attached.)

DATE: 8/26/09

SIGNATURE OF LOCAL FLOODPLAIN COORDINATOR: _____

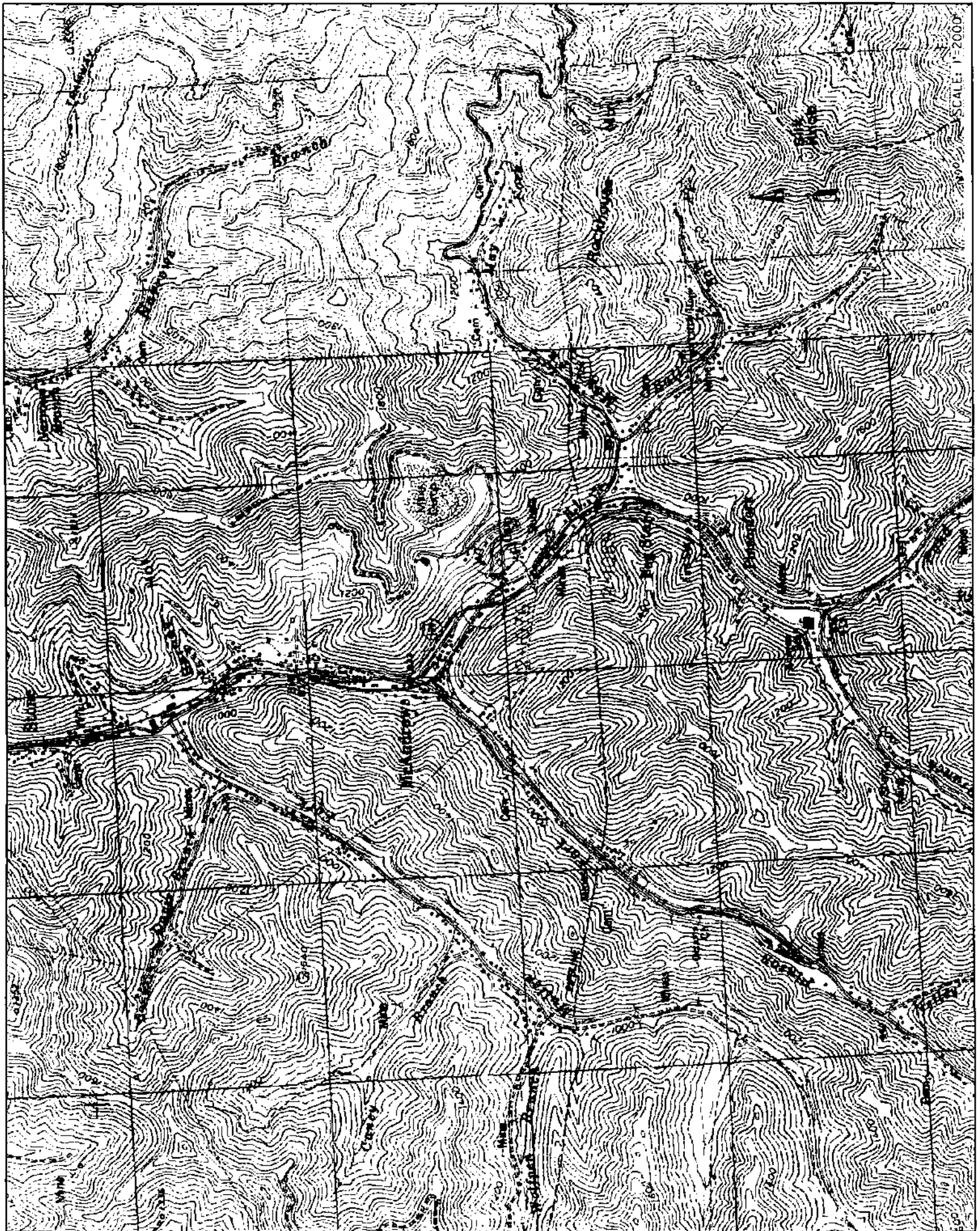
N/A

Permit application will be returned to applicant endorsed by the local floodplain coordinator.

DATE: _____

SUBMIT APPLICATION AND ATTACHMENTS TO:

Floodplain Management Section
Division of Water
14 Reilly Road
Frankfort, KY 40601



Kentucky Transportation		PROJECT: KY 199		STREAM: Pond Creek & UT's	
COUNTY: PIKE	STATE: KENTUCKY	Bridge Replacement Projects		ITEM: 12-1076, 12-1089	VICINITY MAP

ATTACHMENT
BLOCK 24

Adjoining Property Owners

ITEM NO. 12-1076

James May
Route 1, Box 37
Pinsonfork, KY 41555

Virginia Marcum
(No Address Found)

Norfolk Southern Corporation
3 Commercial Place
Norfolk, VA 23510-2191

Pocahontas Development Corporation
P.O. Box 1517
Bluefield, WV 24701

ITEM NO. 12-1089

Charles West
3284 Pond Creek Road
P.O. Box 214
McAndrews, KY 41543

Carl & Jacklyn Starr
3742 Pond Creek Road
Pinsonfork, KY 41555

Walter & Connie Edwards
P.O. Box 95
Pinsonfork, KY 41555

SUMMARY OF IMPACTS

Item No. 12-1076.00 & 12-1089.00

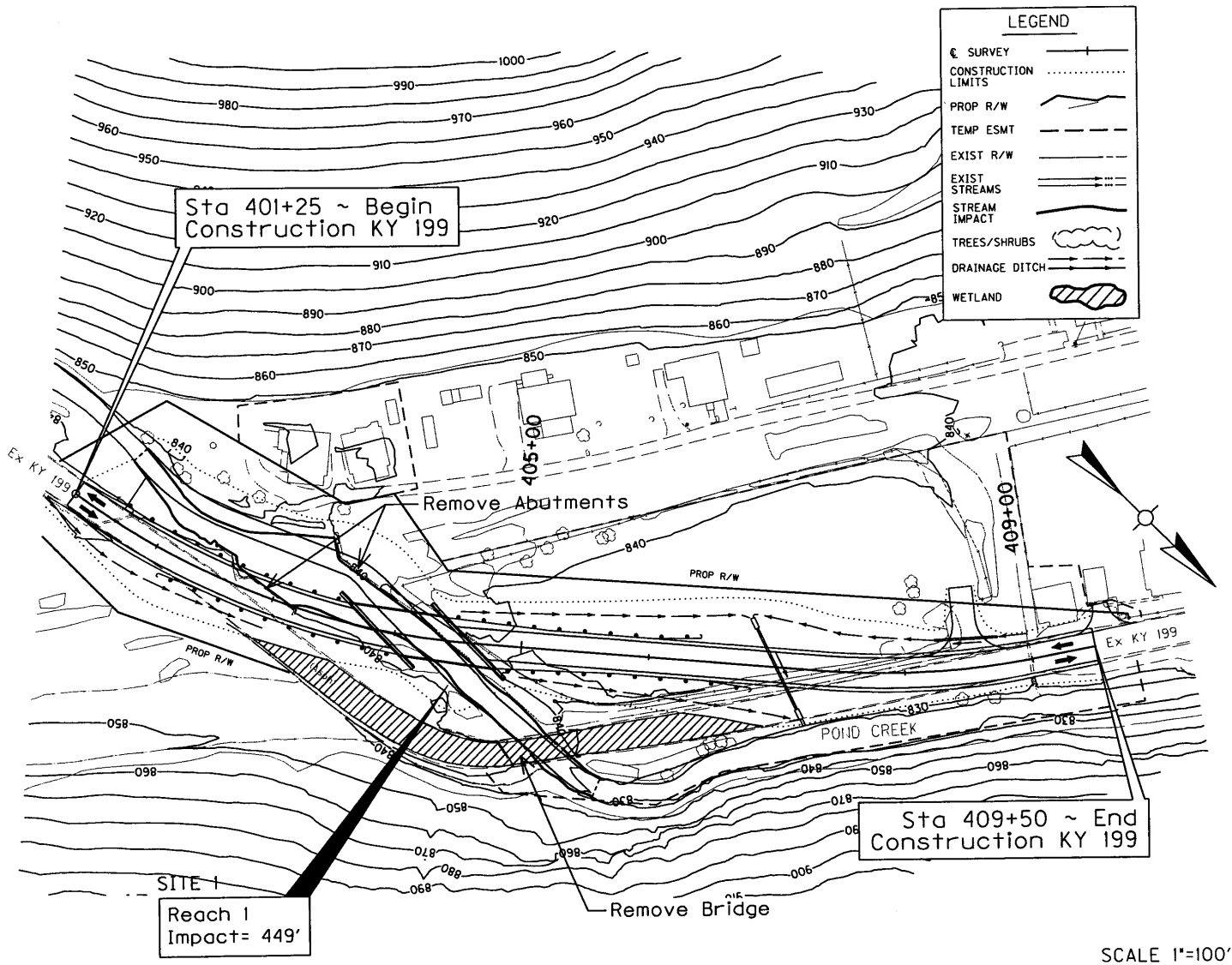
(Existing bridge structures will be removed at both sites)

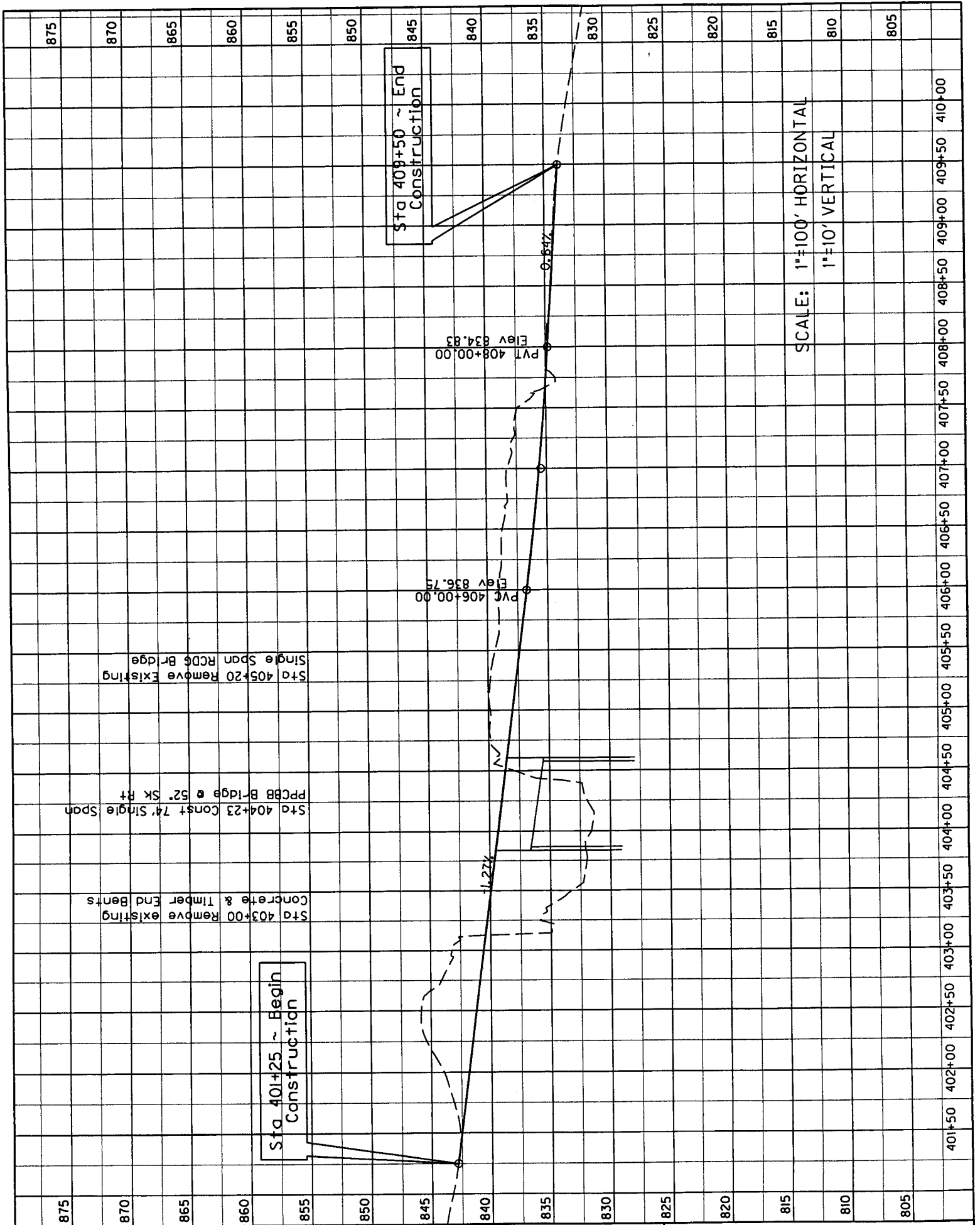
12-1076.00

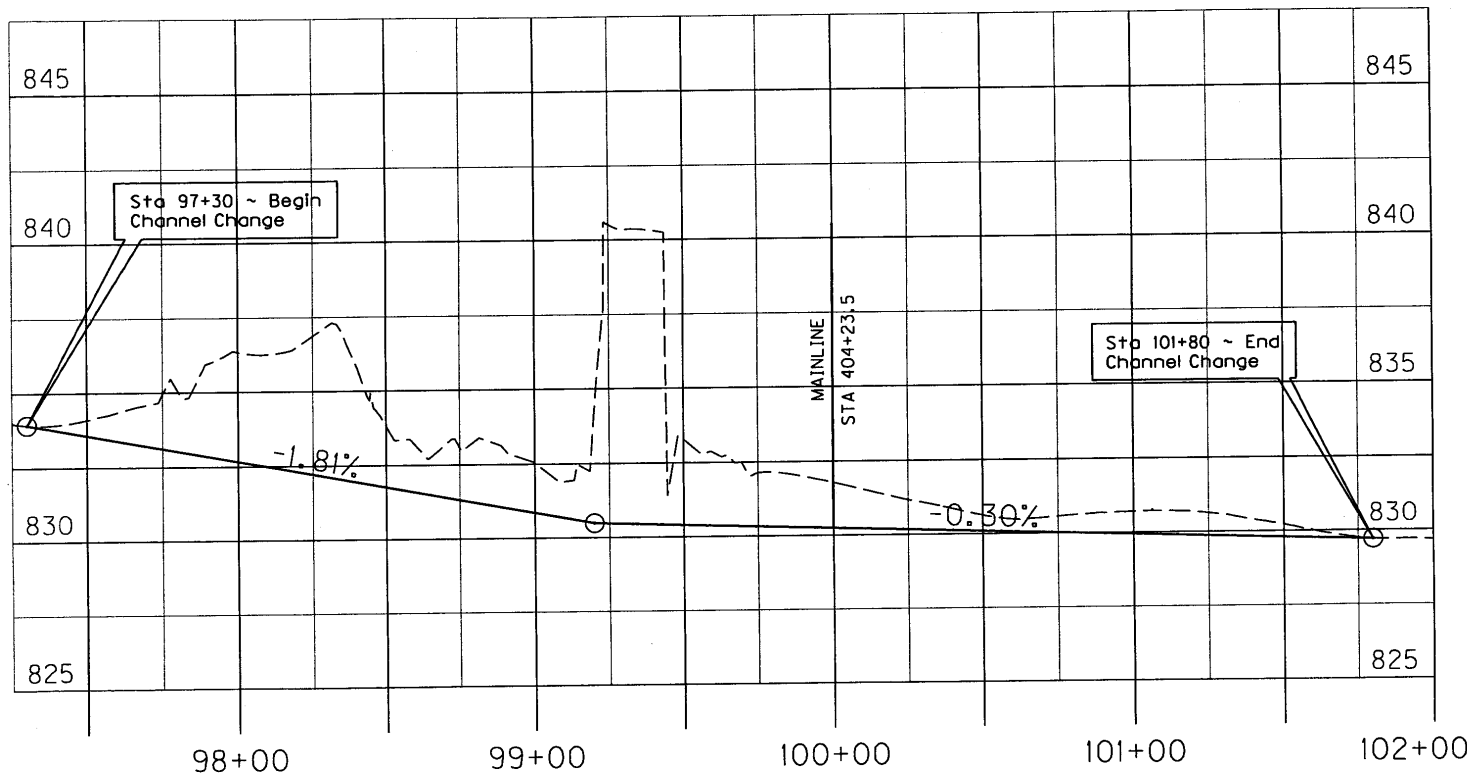
1. Sta. 404+23.46 – Replace an existing bridge, and the remaining abutments of another, with one single clear span bridge with 450' of associated channel change; on Pond Creek. This impacts **449' of perennial stream** (Reach 1). The impact to waters is **0.309 acres**. The drainage area affected is **8.78 square miles**. The site is located at N37-33-55, W82-15-51. (Nationwide Permit No. 14, Ind. WQC)

12-1089.00

2. Right Sta. 48+68 to Rt. Sta. 53+02 – Construct a gabion wall and soldier pile retaining wall along KY199 and Pond Creek. The gabion wall impacts **50' of the left descending bank**, the soldier pile wall impacts **222' of the left descending bank (length includes replacing 50' of existing retaining wall)**, of a **perennial stream** (Reach 2). The retaining walls average 0.4 CY per linear foot of fill/obstruction below the ordinary high water mark (conservatively estimated at a depth of approximately 5 feet). The impact to waters is **0.018 acres** (at OHW). The drainage area affected is **8.47 square miles**. The site is located near N37-33-38, W82-15-36. (Nationwide Permit No. 13)
3. Sta. 53+77 - Replace an existing bridge with a single clear span bridge, with 80' of retaining wall on the right descending bank; on Pond Creek. This impacts **90' of the left descending bank**, and **140' of the right descending bank** of a **perennial stream** (Reach 2). The impact to waters is **0.043 acres** (0.022 acres along left bank, and 0.021 acres along the right bank). The drainage area affected is **8.47 square miles**. The site is located near N37-33-39, W82-15-36. (Nationwide Permit No. 14)
4. Sta. 54+51 – Construct a culvert extension, 110' in length, with 7' of outlet channel, on an existing culvert for an **intermittent** tributary (Reach 3) to Pond Creek. This replaces the last **23' of existing pipe**, which outlets at a wall along Pond Creek. The extension relocates the outlet. The impact to waters is **0.003 acres** (23' of culvert). The drainage area affected is **134 acres**. The site is located near N37-33-39, W82-15-37. (Nationwide Permit No. 14)

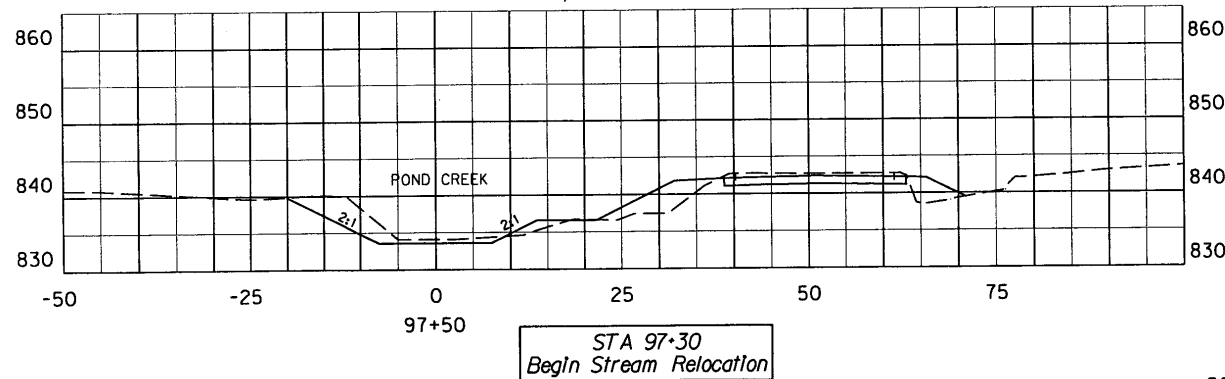
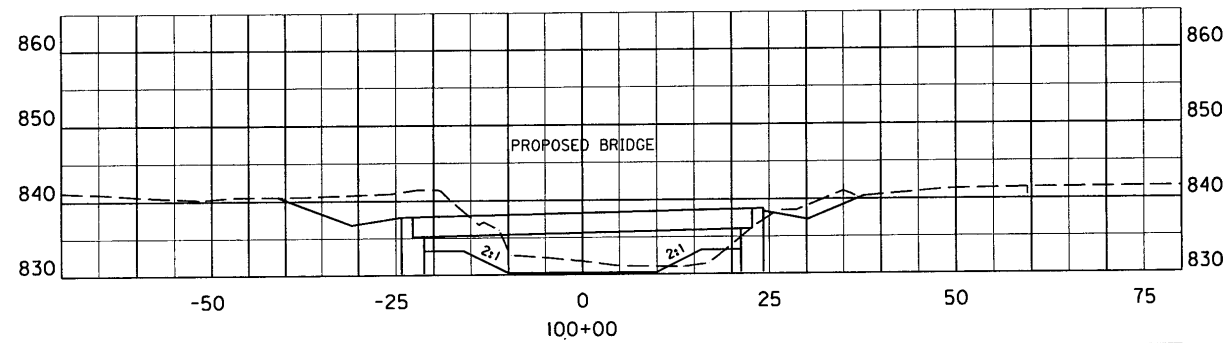
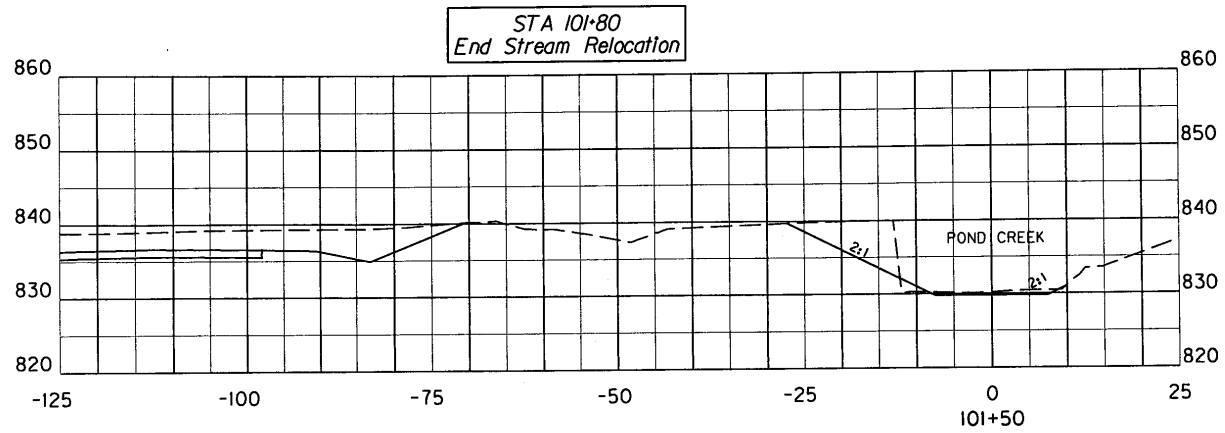




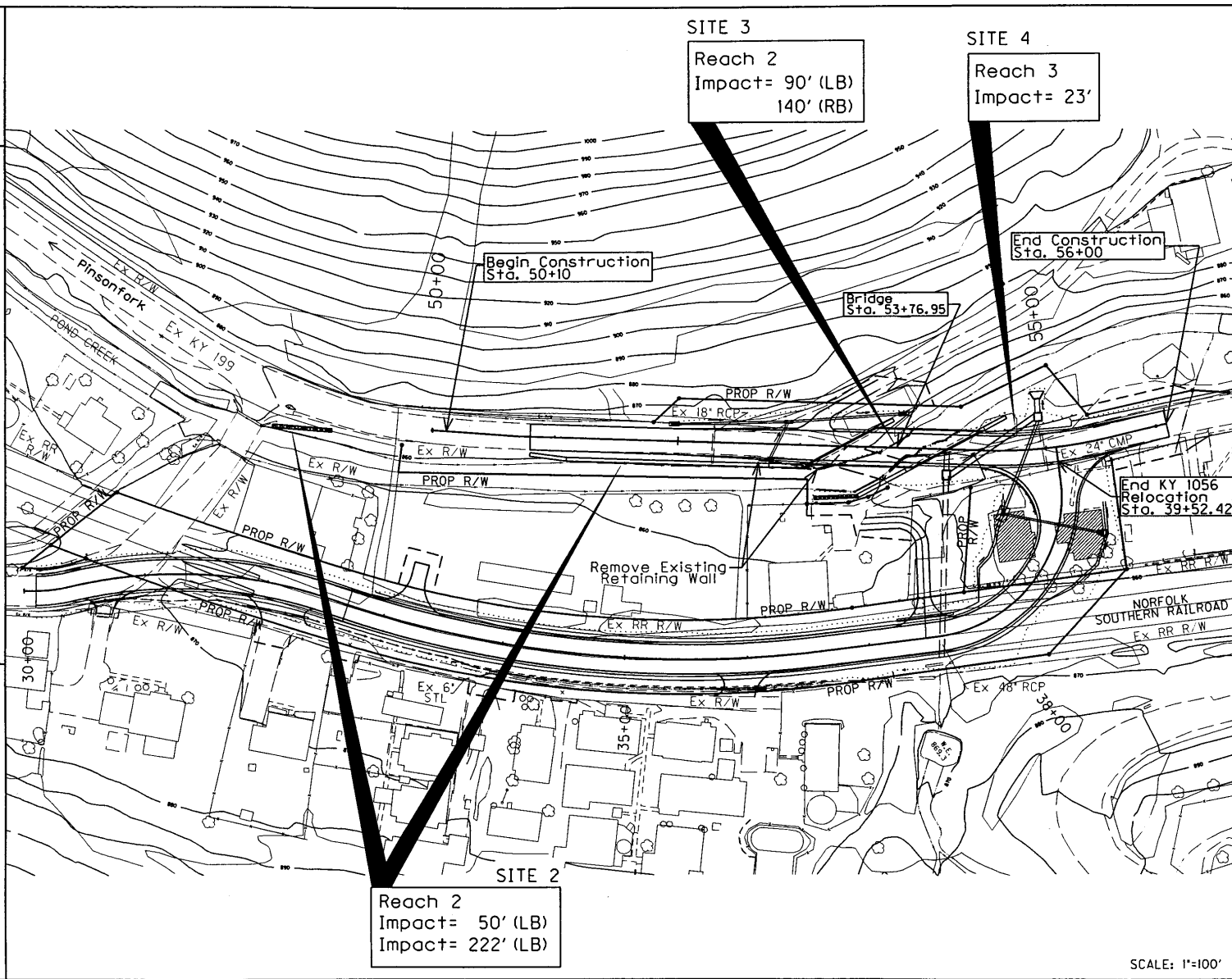


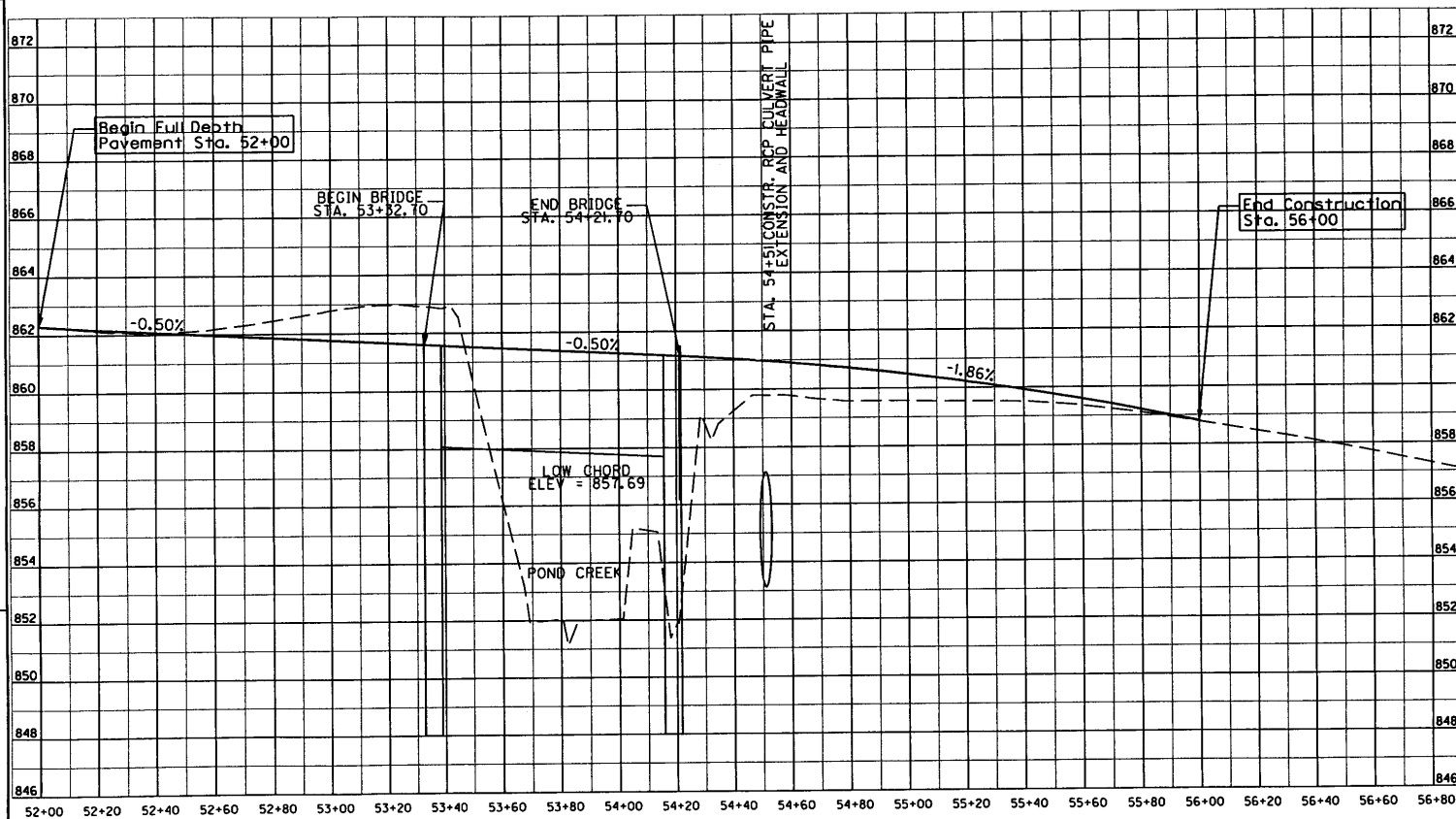
SCALE: 1"=50' HORIZONTAL
1"=5' VERTICAL

Kentucky
Transportation
PROJECT: KY 199
COUNTY: PIKE
STATE: KENTUCKY
Channel Change - Typical Sections
STREAM: Pond Creek
ITEM: 12-1076
SHEET 4

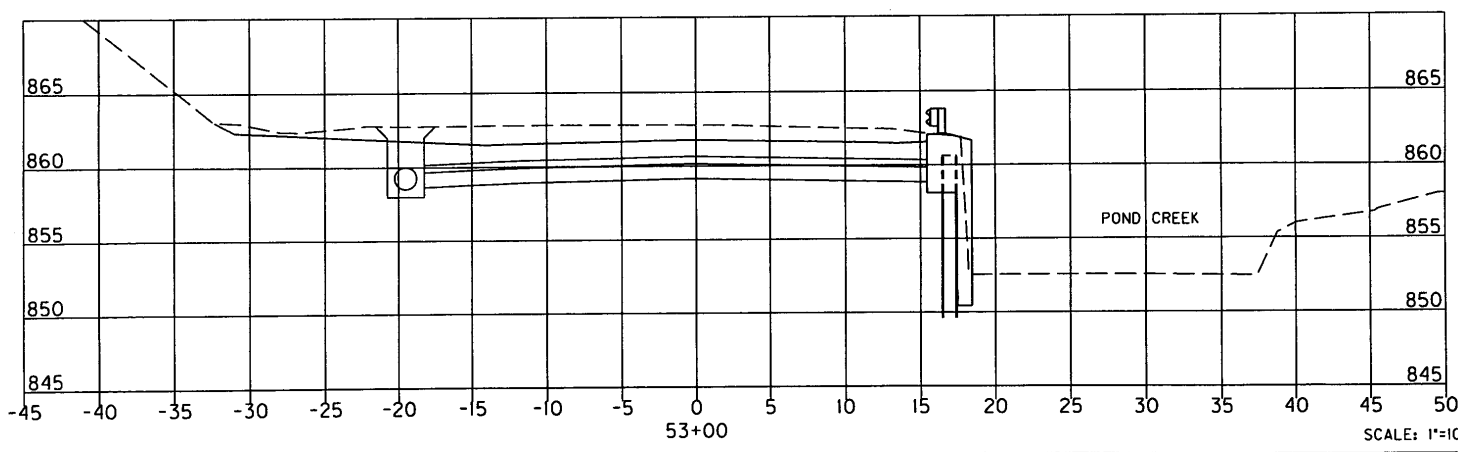
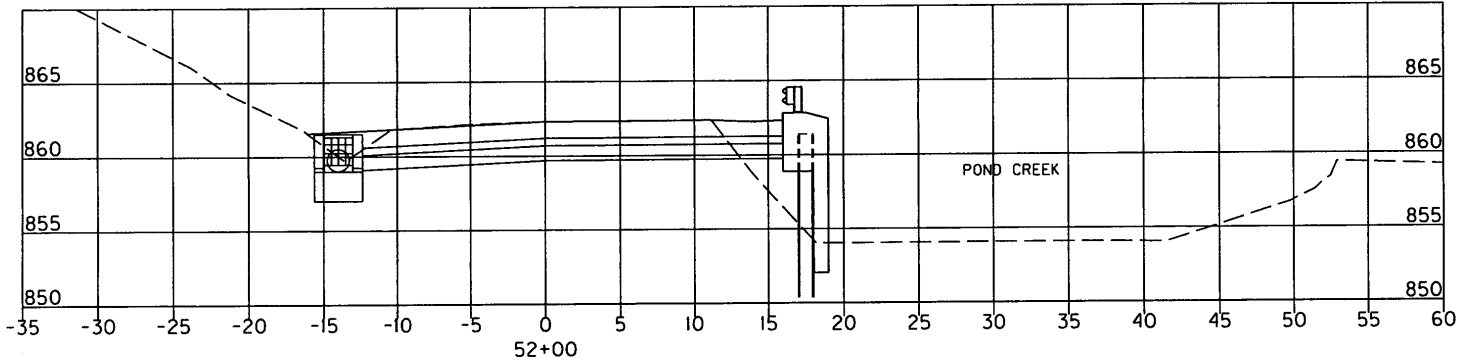
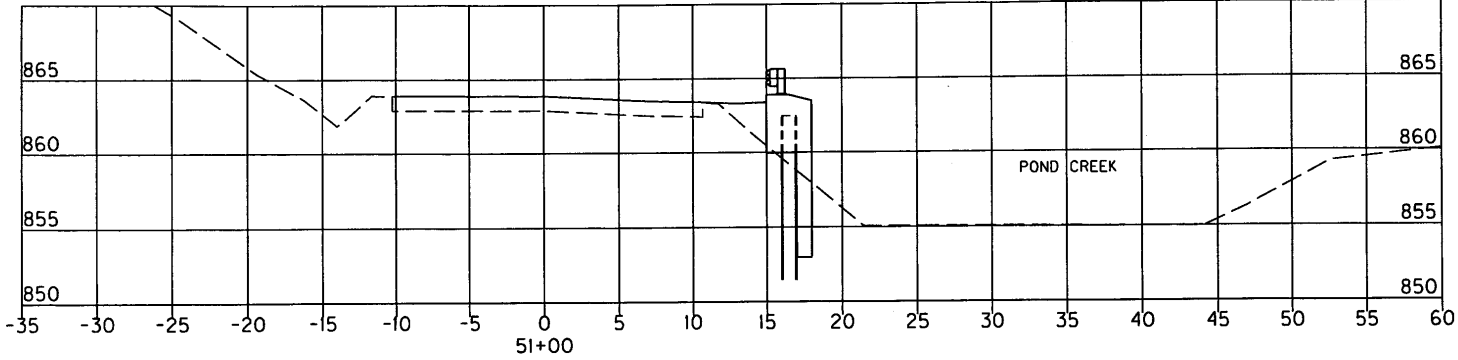


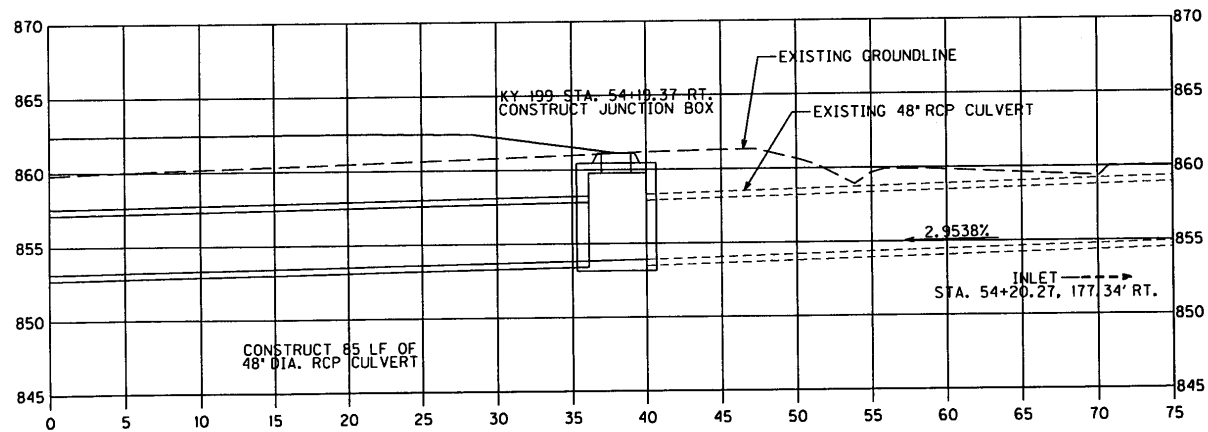
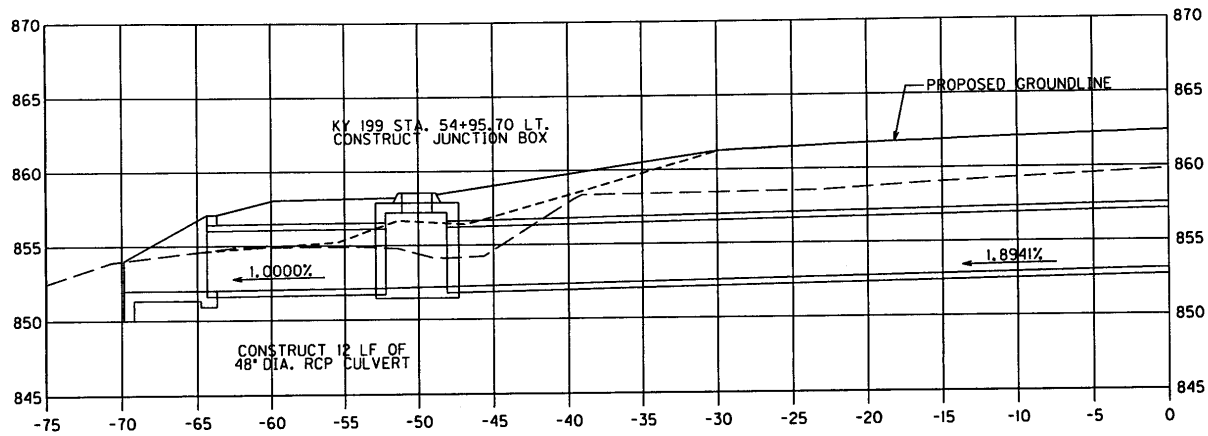
SCALE: 1"=20'





SCALE: 1"=50' HORIZONTAL
1"=5' VERTICAL





STA. 54+51

SCALE: 1"=10'

Summary of Impacts Table

Site No.	Reach/Resource No.	STA.	Lat. / Long.	Sheet No.	Impact Category	Stream Type	Watershed (acres)	Impact (ft.)	Impact (acres)	Riffle/Pool Complex	Mitigation Required
1	1	404+23	N37-33-55 W82-15-51	1,2,3,4	Ch. Change & Bridge	Perennial	5619	449	0.309	No	Yes
2	2	L48+68 to L53+02	N37-33-38 W82-15-36	5,7	Fill (Wall) Fill (Wall)	Perennial	5421	50-LB 222-LB	0.003 0.015	Yes "	No "
3	2	53+77	N37-33-39 W82-15-36	5,6	Bridge	Perennial	5421	90-LB 140-RB	0.022 0.021	Yes	No
4	3	54+51	N37-33-39 W82-15-37	5,8	Culvert	Intermittent	134	23	0.003	No	No

HUC Analysis of Stream Impacts

HUC #	HUC Name	STA.	Lat. / Long.	Sheet No.	Impact Category	Stream Type	Permit Type	Watershed (acres)	Impact (ft.)	Impact (acres)	RBP Score	Quality	Rifle/Pool Complex	Mitigation Required
05070201-160-030	Pond Creek	404+23	N37-33-55 W82-15-51	1 to 4	Ch. Change & Bridge	Perennial	NWP14	5619	449	0.309	88	Poor	Yes	Yes
"	"	L48+68 to L53+02	N37-33-38 W82-15-36	5,7	Fill (Wall) Fill (Wall)	Perennial	NWP13	5421	50-LB 222-LB	0.003 0.015	96 "	Poor "	Yes "	No "
"	"	53+77	N37-33-39 W82-15-36	5,6	Bridge	Perennial	NWP14	5421	90-LB 140-RB	0.022 0.021	96	Poor	Yes	No
"	"	54+51	N37-33-39 W82-15-37	5,8	Culvert	Intermittent	NWP14	134	23**	0.003	125*	Average	No	No

*Score is for open waters above impact site.

**23' of existing pipe to be removed prior to extension

MITIGATION DISCUSSION
Pike Co., KY 199
Item No. 12-1076 & 12-1089

For intermittent and perennial stream impacts, the need for mitigation was based on whether an impact site was greater than 0.10 acres in area (including wetland impact acreage where appropriate), greater than 300 feet in length, or was determined to be a Special Aquatic Site (i.e., riffle/pool complex). For ephemeral streams, mitigation needs were based on impacts greater than 0.10 acres, but no length was utilized. However, the Division of Water not only requires mitigation for intermittent and perennial streams where the impact is greater than 300 feet, but where the cumulative unmitigated impacts, within a 14-digit HUC watershed, exceeds 500 feet. There is one 14-digit HUC that define the project sites:

Pond Creek = 05070201-160-030

In this watershed there are two impact sites to Pond Creek (Reaches 1 and 2), a perennial stream, and one impact to an intermittent tributary (Reach 3).

At the 12-1076.00 site, the Reach 1 impact is over 300 feet (a 450 foot channel change); and requires mitigation. At the 12-1089.00 site, Reach 2 has impacts, but are primarily confined to one bank or the other. Excluding the impacts due to the bridge replacement (new abutments), there is a 272 foot impact along the left descending bank (at two locations) and an 80 foot impact along the right descending bank above the bridge; associated with retaining walls to address slope stability. Treating the bank stabilization and bridge construction as separate impacts (covered under separate NWP's as well), the site may not meet mitigation thresholds. It should be noted that the total impact to waters for both the bridge and retaining walls is less than 0.10 acres. No mitigation is provided.

The intermittent stream (Reach 3 at the 12-1089.00 site) is completely encased in a culvert in the area of the project, and outlets at a retaining wall at Pond Creek. The proposed work is to remove a small pipe section and headwall (23 feet) and extend the culvert further downstream, avoiding the new bridge construction area. There will be no impacts to any open channel associated with the intermittent stream, therefore no mitigation is being provided.

In summary, the perennial stream (Pond Creek) impacted by the bridge at the 12-1076.00 site requires mitigation, while the impacts to Pond Creek and its intermittent tributary at site 12-1089.00 may not require mitigation. Mitigation is proposed by payment of an in lieu fee, based on the Corps of Engineers' Eastern Kentucky Protocol. See the in lieu fee payment calculation table for stream impacts.

No wetlands are found, therefore no wetland mitigation is required.

In-lieu Fee Table for Stream and Wetland impacts

Site Number	Wetland, Stream I.D.	Project Station	Stream Type	EPA RBP Score	Impact Length (ft)	Impact Area (ac)	Impact Type	In-lieu Fee Amount (\$)
1	Reach 1	404+23.46	Perennial	88	449	0.309	ch. change	80,820.00
							Total Fee =	80,820.00

EII Calculation for High Gradient Streams In Eastern Kentucky Coalfield (Version 2002.6)
 "(Family Level Taxonomy - All Habitats)"



EII	Model
0.18	0.18

Variables	Measure	Units
Enter quantitative or categorical measure from Field Data Sheet in shaded cells		
RBP Habitat Parameters		
1. Epifaunal Substrate	5	no units
2. Embeddedness	5	no units
3. Velocity/Depth Regime	15	no units
4. Sediment Deposition	11	no units
5. Channel Flow Status	14	no units
6. Channel Alteration	6	no units
7. Freq. Of Riffles (bends)	18	no units
8. Bank stability (both combined)	8	no units
9. Veg. Protection (both combined)	4	no units
10. Riparian Width (both combined)	4	no units
Total Habitat Score	88	no units



Macroinvertebrate Data - Family Level (All Habitats)		
11. Family Taxa Richness	0	# of taxa sampled
12. Family EPT Richness	0	# of EPT species sampled
13. % Ephemeroptera	0	% Mayflies (0-100)
14. % Chironomidae & Oligochaeta	0	% Midges & Worms (0-100)
15. mFBI	0	no units
Macroinvertebrate Index	NA	no units
Conductivity	674	microMhos/cm

In-Lieu Fee Compensatory Mitigation Calculator (Version 2002.8)

Perennial Streams

Project ID:

Pike Co., Item No. 12-1076.00

Stream/Reach:

Reach 1 (Pond Creek) - Perennial

Loss of Ecological Integrity/running foot due to Project Impacts =

0.1

UNITS
EII (0-1)

Impact Length =

449

(ft)

Compensatory Mitigation Ratio =

1.00

In-Lieu Fee (adjusted to offset cumulative impacts) =

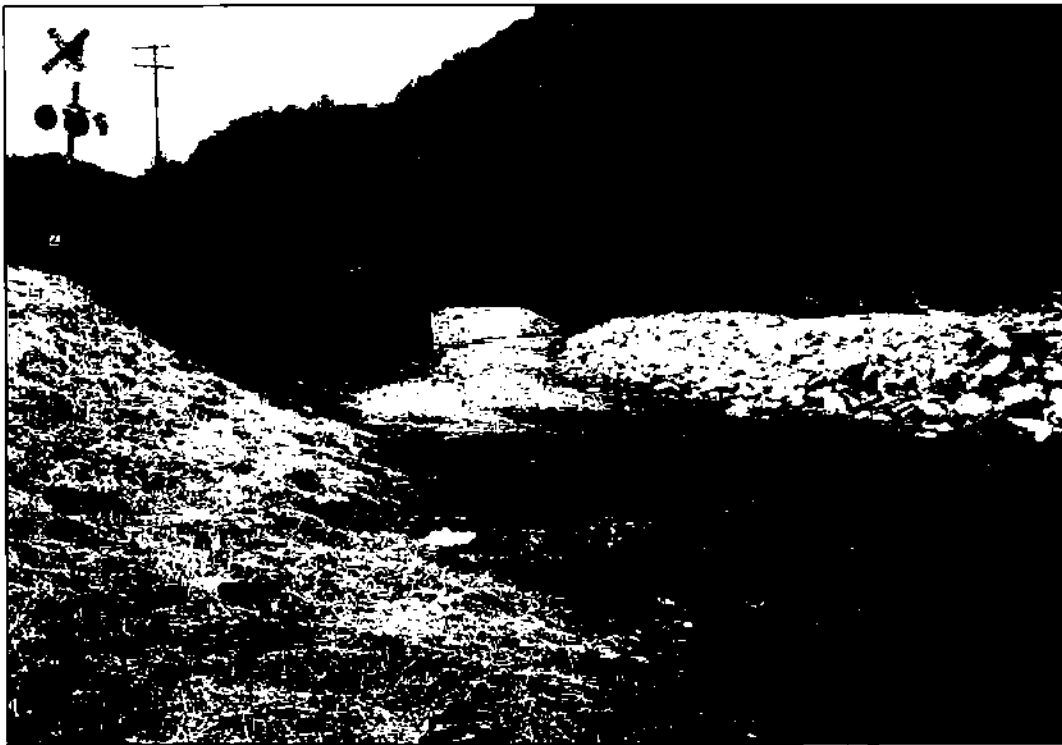
\$90,620.00



12-1076 Railroad bridge prior to destruction by flood (only abutments remain)



12-1076 Existing KY199 bridge to be removed



12-1076.00 – Reach 1, looking upstream at RR bridge site



12-1076.00 – Reach 1, looking downstream from RR bridge site



12-1089 Bank failure/erosion area along KY199



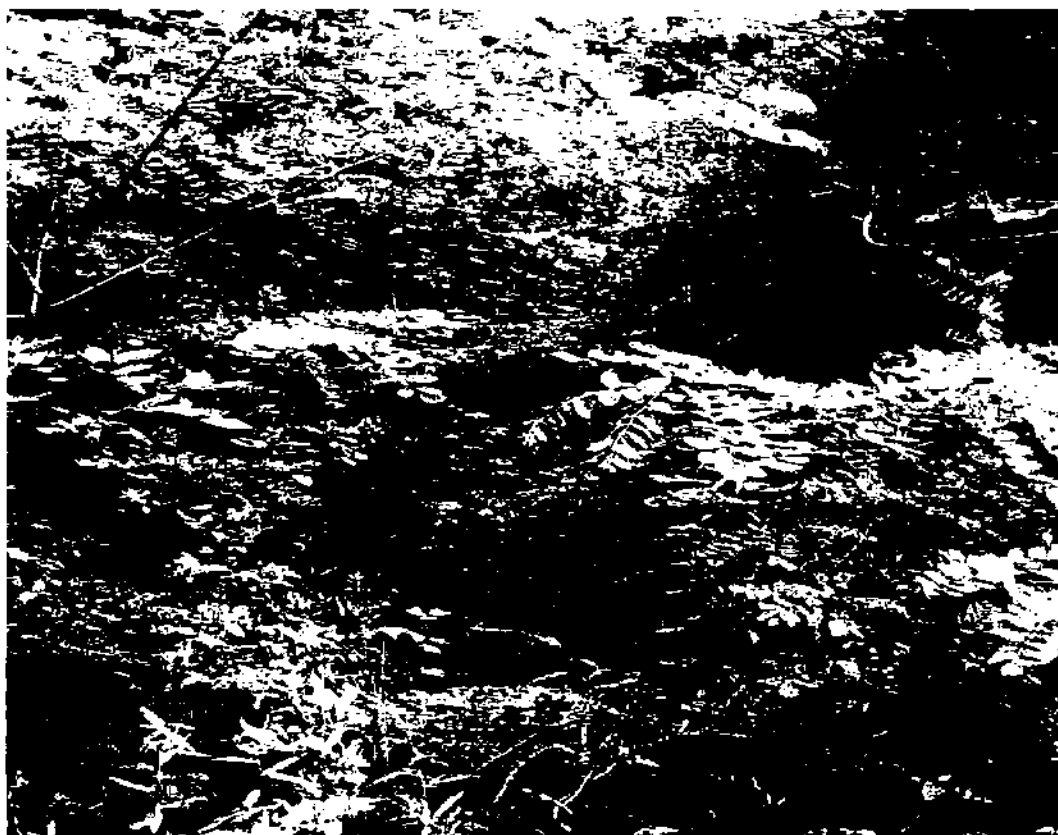
12-1089 Existing retaining wall upstream of bridge



12-1089 Upstream face of bridge



12-1089.00 – Reach 3, looking upstream on Pond Creek at existing culvert outlet



12-1089.00 – Reach 3, upstream of culvert inlet (headwall visible at bottom)



12-1089.00 – Reach 2, looking upstream at bridge (outlet for Reach 3 is visible on the left)



12-1089.00 – Reach 2, looking downstream at bridge

ATTACHMENT

PRELIMINARY JURISDICTIONAL DETERMINATION FORM

BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PRELIMINARY JURISDICTIONAL DETERMINATION (JD):

B. NAME AND ADDRESS OF PERSON REQUESTING PRELIMINARY JD:
KYTC, Division of Environmental Analysis c/o Dave Harmon, 200 Mero Street,
Frankfort, KY 40622

C. DISTRICT OFFICE, FILE NAME, AND NUMBER:

**D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION: 12-1089
(USE THE ATTACHED TABLE TO DOCUMENT MULTIPLE WATERBODIES AT
DIFFERENT SITES)**

State: Kentucky County/parish/borough: Pike City: Pinsonfork (nearest)
Center coordinates of site (lat/long in degree decimal format): Lat. 37.56097°N,
Long. 82.26018°W.

Universal Transverse Mercator: 16 4157851N 388701E

Name of nearest waterbody: Pond Creek

Identify (estimate) amount of waters in the review area:

Non-wetland waters: Perennial=362' (LB), 140' (RB), Intermittent= 23 linear
feet: width (ft) and/or 0.061(total) acres.

Cowardin Class: N/A

Stream Flow: Perennial & Intermittent

Wetlands: N/A acres.

Cowardin Class: N/A

Name of any water bodies on the site that have been identified as Section 10
waters:

Tidal: N/A

Non-Tidal: N/A

**E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT
APPLY):**

☐ Office (Desk) Determination. Date:

☐ Field Determination. Date(s):

1. The Corps of Engineers believes that there may be jurisdictional waters of the
United States on the subject site, and the permit applicant or other affected party
who requested this preliminary JD is hereby advised of his or her option to request
and obtain an approved jurisdictional determination (JD) for that site.

Nevertheless, the permit applicant or other person who requested this preliminary

JD has declined to exercise the option to obtain an approved JD in this instance and at this time.

2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "pre-construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an approved JD for the activity, the permit applicant is hereby made aware of the following: (1) the permit applicant has elected to seek a permit authorization based on a preliminary JD, which does not make an official determination of jurisdictional waters; (2) that the applicant has the option to request an approved JD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an approved JD could possibly result in less compensatory mitigation being required or different special conditions; (3) that the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) that the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) that undertaking any activity in reliance upon the subject permit authorization without requesting an approved JD constitutes the applicant's acceptance of the use of the preliminary JD, but that either form of JD will be processed as soon as is practicable; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a preliminary JD constitutes agreement that all wetlands and other water bodies on the site affected in any way by that activity are jurisdictional waters of the United States, and precludes any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an approved JD or a preliminary JD, that JD will be processed as soon as is practicable. Further, an approved JD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331, and that in any administrative appeal, jurisdictional issues can be raised (see 33 C.F.R. 331.5(a)(2)). If, during that administrative appeal, it becomes necessary to make an official determination whether CWA jurisdiction exists over a site, or to provide an official delineation of jurisdictional waters on the site, the Corps will provide an approved JD to accomplish that result, as soon as is practicable.

This preliminary JD finds that there "*may be*" waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:


SUPPORTING DATA. Data reviewed for preliminary JD (check all that apply - checked items should be included in case file and, where checked and requested, appropriately reference sources below):

☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant:

- ☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - ☐ Office concurs with data sheets/delineation report.
 - ☐ Office does not concur with data sheets/delineation report.
- ☐ Data sheets prepared by the Corps:
- ☐ Corps navigable waters' study:
- ☒ U.S. Geological Survey Hydrologic Atlas:
 - ☐ USGS NHD data.
 - ☒ USGS 8 and 12 digit HUC maps.
- ☒ U.S. Geological Survey map(s). Cite scale & quad name: 1:24000, Belfry.
- ☐ USDA Natural Resources Conservation Service Soil Survey. Citation:
- ☐ National wetlands inventory map(s). Cite name:
- ☐ State/Local wetland inventory map(s):
- ☒ FEMA/FIRM maps: Pike County FIRM, dated 5/02/08.
- ☐ 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- ☒ Photographs: ☐ Aerial (Name & Date):
 - or ☒ Other (Name & Date): Assessment photos, 6/08/09.
- ☐ Previous determination(s). File no. and date of response letter:
- ☐ Other information (please specify):

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

 Signature and date of
 Regulatory Project Manager
 (REQUIRED)


 Signature and date of
 person requesting preliminary JD
 (REQUIRED, unless obtaining the
 signature is impracticable)

Pike County, Item No. 12-1089.00

Stream name	Latitude	Longitude	Cowardin Class/Flow Regime	Estimated amount of aquatic resource in review area	Class of aquatic resource
Pond Ck. Reach 2	37.56097	82.26018	Perennial	362 linear ft (LB)	non-section 10 – non-wetland
				140 linear ft (RB)	
Tributary Reach 3	37.56106	82.26030	Intermittent	23 linear feet*	non-section 10 – non-wetland

*The intermittent stream, in the impact area, is entirely in a culvert that will be extended to a new outlet location (by first removing 23' of existing pipe).

High Gradient Stream Data Sheet

STREAM NAME: <i>Reach 2 (Assm't No. 2)</i>			LOCATION: <i>Existing Bridge on Item No. 12-1089.00</i>		
STATION:	DRAINAGE AREA (AC)	- 5421	BASIN/WATERSHED <i>Pond Creek</i>		
LAT: <i>37-33-39</i>	LONG: <i>82-15-36</i>		COUNTY: <i>Pike</i>	USGS 7.5 TOPO; <i>Belfry</i>	
DATE: <i>06/08/09</i>	TIME: : <input checked="" type="checkbox"/> AM <input type="checkbox"/> PM		INVESTIGATORS: <i>Rob Lewis</i>		
TYPE SAMPLE: <input type="checkbox"/> P-CHEM <input type="checkbox"/> Macroinvertebrate <input type="checkbox"/> FISH <input type="checkbox"/> BACT.					
WEATHER: Now Past 24 hours Has there been a heavy rain in the last 7 days? <input type="checkbox"/> <input type="checkbox"/> Heavy rain <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> <input type="checkbox"/> Steady rain Air temperature <u>85</u> °F. Inches rainfall in past 24 hours <u>0</u> in <input type="checkbox"/> <input type="checkbox"/> Intermittent showers <u>95</u> % Cloud Cover <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> Clear/sunny					
P-Chem: Temp (°F) <u>67.6</u> D.O. (mg/l) _____ % Saturation _____ pH(S.U.) _____ Cond. <u>1043</u> <input type="checkbox"/> Grab					
INSTREAM WATERSHED FEATURES Stream Width EOW <u>10-15</u> ft Stream Width BF <u>30-35</u> ft Avg. BF Depth <u>5.0</u> ft Avg. current depth <u>0.5-3.0</u> ft Est. Reach Length <u>500</u> ft			LOCAL WATERSHED FEATURES: Predominant Surrounding Land Use: <input type="checkbox"/> Surface Mining <input type="checkbox"/> Construction <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Deep Mining <input type="checkbox"/> Commercial <input type="checkbox"/> Pasture/Grazing <input type="checkbox"/> Oil Wells <input type="checkbox"/> Industrial <input type="checkbox"/> Silviculture <input type="checkbox"/> Land Disposal <input type="checkbox"/> Row Crops <input checked="" type="checkbox"/> Urban Runoff/Storm Sewers		
Hydraulic Structures: Stream Flow; Stream Type; <input type="checkbox"/> Dams <input checked="" type="checkbox"/> Bridge Abutments <input type="checkbox"/> Dry <input type="checkbox"/> Pooled <input type="checkbox"/> Low <input checked="" type="checkbox"/> Normal <input checked="" type="checkbox"/> Perennial <input type="checkbox"/> Intermittent <input type="checkbox"/> Island <input type="checkbox"/> Waterfalls <input type="checkbox"/> High <input type="checkbox"/> Very Rapid or Torrential <input type="checkbox"/> Ephemeral <input type="checkbox"/> Seep <input type="checkbox"/> Other <input checked="" type="checkbox"/> Culverts					
Riparian Vegetation: Dominate Type: <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Shrubs <i>Sycamore</i> <input type="checkbox"/> Grasses <input checked="" type="checkbox"/> Herbaceous <i>Paulonia</i> Number of Strata <u>3</u>		Dom. Tree/Shrub Taxa <i>Sycamore</i> <i>Paulonia</i>		Canopy Cover; <input checked="" type="checkbox"/> Fully Exposed (0-25%) <input type="checkbox"/> Partially Exposed (25-50%) <input type="checkbox"/> Partially Shaded (50-75%) <input type="checkbox"/> Fully Shaded (75-100%)	
Channel Alterations; <input type="checkbox"/> Dredging <input checked="" type="checkbox"/> Channelization (<input checked="" type="checkbox"/> Full <input type="checkbox"/> Partial)					
Substrate <input checked="" type="checkbox"/> Est. <input type="checkbox"/> P.C		Riffle <u>80</u> %	Run _____ %	Pool <u>20</u> %	
Silt/Clay (<0.06 mm)				40	
Sand (0.06-2 mm)		20		40	
Gravel (2-64 mm)		40		20	
Cobble (64-256 mm)		35			
Boulders (>256 mm)		5			
Bedrock					
Habitat		Condition Category			
Parameter	Optimal	Suboptimal	Marginal	Poor	
1. Epifaunal Substrate/ Available Cover	Greater than 70% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are <u>not</u> new fall and <u>not</u> transient.	40-70% mix of stable habitat; well suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of new fall, but not yet prepared for colonization (may rate at high end of scale).	20-40% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 20% stable habitat" lack of habitat is obvious; substrate unstable or lacking.	
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	
2. Embeddedness	Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment. Layering of cobble provides diversity of niche space.	Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment.	Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment.	Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment.	
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	
3. Velocity/Depth Regime	All four velocity/depth regimes present (slow-deep, slow-shallow, fast-deep, fast-shallow. Deep > 1.5 feet.	Only 3 of the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes)	Only 2 of the 4 habitat regimes present (if fast-shallow or slow shallow are missing, score low)	Dominated by 1 velocity/depth regime.	
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	

Reach 2

4. Sediment Deposition	Little or no enlargement of islands or point bars and less than 5% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 5-30% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 30-50% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
5. Channel Flow Status	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills > 75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
6. Channel Alteration	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr.) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40-80% of stream reach channelized and disrupted.	Banks shored with gabion of cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
7 Frequency of Riffles	Occurrence of riffles relatively frequent; spacing between riffles 5 to 7 stream widths. Variety of habitat is key. In streams where riffles are continuous, boulders or logs are important.	Occurrence of riffles infrequent; distance between riffles divided by stream width is between 7 to 15.	Occasional riffle or bend; bottom contours provide some habitat; distance between riffles divided by stream width is between 15 to 25.	Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by stream width is > than 25.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
8. Bank Stability	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	Moderately stable, infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable, 30-60% of bank in reach has areas of erosion, high erosion potential during floods.	Unstable, many eroded areas, "raw" areas frequently along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.
SCORE (LB)	Left Bank 10 9	8 7 6	5 4 3	2 1 0
SCORE (RB)	Right Bank 10 9	8 7 6	5 4 3	2 1 0
9. Vegetative Protection (score each bank)	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruptive of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.
SCORE (LB)	Left Bank 10 9	8 7 6	5 4 3	2 1 0
SCORE (RB)	Right Bank 10 9	8 7 6	5 4 3	2 1 0
10. Riparian Vegetative Zone Width (score each bank riparian zone).	Width of riparian zone > 18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riparian zone <6 meters; little or no riparian vegetation due to human activities.
SCORE (LB)	Left Bank 10 9	8 7 6	5 4 3	2 1 0
SCORE (RB)	Right Bank 10 9	8 7 6	5 4 3	2 1 0

Total Score

96

NOTES/COMMENTS; Roadway embankment actively failing along entire reach. Evidence of recent flooding.

High Gradient Stream Data Sheet

STREAM NAME: <i>Reach 3 (Assm't No. 1)</i>			LOCATION: <i>Upstream of culvert on Item No. 12-1089.00</i>		
STATION:		DRAINAGE AREA (AC) <i>- 134</i>	BASIN/WATERSHED <i>Pond Creek</i>		
LAT: <i>37-33-39</i>		LONG: <i>82-15-37</i>	COUNTY: <i>Pike</i>		USGS 7.5 TOPO: <i>Belfry</i>
DATE: <i>06/08/09</i>		TIME: <input checked="" type="checkbox"/> AM <input type="checkbox"/> PM	INVESTIGATORS: <i>Rob Lewis</i>		
TYPE SAMPLE: <input type="checkbox"/> P-CHEM <input type="checkbox"/> Macroinvertebrate <input type="checkbox"/> FISH <input type="checkbox"/> BACT.					
WEATHER: Now Past 24 hours Has there been a heavy rain in the last 7 days? <input type="checkbox"/> <input type="checkbox"/> Heavy rain <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> <input type="checkbox"/> Steady rain Air temperature <i>85</i> °F. Inches rainfall in past 24 hours <i>0</i> in <input type="checkbox"/> <input type="checkbox"/> Intermittent showers <i>95</i> % Cloud Cover <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> Clear/sunny					
P-Chem: Temp (°F) <i>66.9</i> D.O. (mg/l) % Saturation pH(S.U.) Cond. <i>970</i> <input type="checkbox"/> Grab					
INSTREAM WATERSHED FEATURES Stream Width EOW <i>1</i> ft Stream Width BF <i>5</i> ft Avg. BF Depth <i>1</i> ft Avg. current depth <i>0.2</i> ft Est. Reach Length <i>50</i> ft			LOCAL WATERSHED FEATURES: Predominant Surrounding Land Use: <input type="checkbox"/> Surface Mining <input type="checkbox"/> Construction <input type="checkbox"/> Forest <input type="checkbox"/> Deep Mining <input type="checkbox"/> Commercial <input type="checkbox"/> Pasture/Grazing <input type="checkbox"/> Oil Wells <input checked="" type="checkbox"/> Industrial (Railroad) <input type="checkbox"/> Silviculture <input type="checkbox"/> Land Disposal <input type="checkbox"/> Row Crops <input checked="" type="checkbox"/> Urban Runoff/Storm Sewers		
Hydraulic Structures: Stream Flow; Stream Type; <input type="checkbox"/> Dams <input type="checkbox"/> Bridge Abutments <input type="checkbox"/> Dry <input type="checkbox"/> Pooled <input type="checkbox"/> Low <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Perennial <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Island <input type="checkbox"/> Waterfalls <input type="checkbox"/> High <input type="checkbox"/> Very Rapid or Torrential <input type="checkbox"/> Ephemeral <input type="checkbox"/> Seep <input type="checkbox"/> Other <input checked="" type="checkbox"/> Culverts					
Riparian Vegetation: Dominate Type: <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Shrubs <i>Sycamore</i> <input type="checkbox"/> Grasses <input checked="" type="checkbox"/> Herbaceous <i>Locust</i> Number of Strata <i>3</i>		Dom. Tree/Shrub Taxa <i>Big tooth aspen</i>		Canopy Cover; <input checked="" type="checkbox"/> Fully Exposed (0-25%) <input type="checkbox"/> Partially Exposed (25-50%) <input type="checkbox"/> Partially Shaded (50-75%) <input type="checkbox"/> Fully Shaded (75-100%)	
Channel Alterations; <input type="checkbox"/> Dredging <input type="checkbox"/> Channelization (<input type="checkbox"/> Full <input type="checkbox"/> Partial)					
Substrate <input checked="" type="checkbox"/> Est. <input type="checkbox"/> P.C		Riffle <i>100</i> %	Run _____ %	Pool _____ %	
Silt/Clay (<0.06 mm)					
Sand (0.06-2 mm)		<i>25</i>			
Gravel (2-64 mm)		<i>25</i>			
Cobble (64-256 mm)		<i>25</i>			
Boulders (>256 mm)		<i>25</i>			
Bedrock					
Habitat		Condition Category			
Parameter	Optimal	Suboptimal	Marginal	Poor	
1. Epifaunal Substrate/ Available Cover	Greater than 70% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are <u>not</u> new fall and <u>not</u> transient.	40-70% mix of stable habitat; well suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of new fall, but not yet prepared for colonization (may rate at high end of scale).	20-40% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 20% stable habitat" lack of habitat is obvious; substrate unstable or lacking.	
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	
2. Embeddedness	Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment. Layering of cobble provides diversity of niche space.	Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment.	Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment.	Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment.	
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	
3. Velocity/Depth Regime	All four velocity/depth regimes present (slow-deep, slow-shallow, fast-deep, fast-shallow. Deep > 1.5 feet.	Only 3 of the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes)	Only 2 of the 4 habitat regimes present (if fast-shallow or slow shallow are missing, score low)	Dominated by 1 velocity/depth regime.	
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	

Reach 3

4. Sediment Deposition	Little or no enlargement of islands or point bars and less than 5% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 5-30% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 30-50% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
5. Channel Flow Status	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills > 75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
6. Channel Alteration	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr.) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40-80% of stream reach channelized and disrupted.	Banks shored with gabion of cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
7 Frequency of Riffles	Occurrence of riffles relatively frequent; spacing between riffles 5 to 7 stream widths. Variety of habitat is key. In streams where riffles are continuous, boulders or logs are important.	Occurrence of riffles infrequent; distance between riffles divided by stream width is between 7 to 15.	Occasional riffle or bend: bottom contours provide some habitat; distance between riffles divided by stream width is between 15 to 25.	Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by stream width is > than 25.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
8. Bank Stability	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	Moderately stable, infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable, 30-60% of bank in reach has areas of erosion, high erosion potential during floods.	Unstable, many eroded areas, "raw" areas frequently along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.
SCORE (LB)	Left Bank 10 9	8 7 6	5 4 3	2 1 0
SCORE (RB)	Right Bank 10 9	8 7 6	5 4 3	2 1 0
9. Vegetative Protection (score each bank)	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruptive of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.
SCORE (LB)	Left Bank 10 9	8 7 6	5 4 3	2 1 0
SCORE (RB)	Right Bank 10 9	8 7 6	5 4 3	2 1 0
10. Riparian Vegetative Zone Width (score each bank riparian zone).	Width of riparian zone > 18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riparian zone <6 meters; little or no riparian vegetation due to human activities.
SCORE (LB)	Left Bank 10 9	8 7 6	5 4 3	2 1 0
SCORE (RB)	Right Bank 10 9	8 7 6	5 4 3	2 1 0

Total Score

125

NOTES/COMMENTS; Massive historical disturbance to stream. Assessment taken above existing culvert in project area.

ATTACHMENT

PRELIMINARY JURISDICTIONAL DETERMINATION FORM

BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PRELIMINARY JURISDICTIONAL DETERMINATION (JD):

B. NAME AND ADDRESS OF PERSON REQUESTING PRELIMINARY JD:
KYTC, Division of Environmental Analysis c/o Dave Harmon, 200 Mero Street,
Frankfort, KY 40622

C. DISTRICT OFFICE, FILE NAME, AND NUMBER:

**D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION: 12-1076
(USE THE ATTACHED TABLE TO DOCUMENT MULTIPLE WATERBODIES AT
DIFFERENT SITES)**

State: Kentucky County/parish/borough: Pike City: Pinsonfork (nearest)
Center coordinates of site (lat/long in degree decimal format): Lat. 37.56547°N,
Long. 82.26429°W.

Universal Transverse Mercator: 16 4158352N 388345E

Name of nearest waterbody: Pond Creek

Identify (estimate) amount of waters in the review area:

Non-wetland waters: 449 linear feet: width (ft) and/or 0.309 acres.

Cowardin Class: N/A

Stream Flow: Perennial

Wetlands: N/A acres.

Cowardin Class: N/A

Name of any water bodies on the site that have been identified as Section 10
waters:

Tidal: N/A

Non-Tidal: N/A

**E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT
APPLY):**

☐ Office (Desk) Determination. Date:

☐ Field Determination. Date(s):

1. The Corps of Engineers believes that there may be jurisdictional waters of the
United States on the subject site, and the permit applicant or other affected party
who requested this preliminary JD is hereby advised of his or her option to request
and obtain an approved jurisdictional determination (JD) for that site.
Nevertheless, the permit applicant or other person who requested this preliminary

JD has declined to exercise the option to obtain an approved JD in this instance and at this time.

2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "pre-construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an approved JD for the activity, the permit applicant is hereby made aware of the following: (1) the permit applicant has elected to seek a permit authorization based on a preliminary JD, which does not make an official determination of jurisdictional waters; (2) that the applicant has the option to request an approved JD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an approved JD could possibly result in less compensatory mitigation being required or different special conditions; (3) that the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) that the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) that undertaking any activity in reliance upon the subject permit authorization without requesting an approved JD constitutes the applicant's acceptance of the use of the preliminary JD, but that either form of JD will be processed as soon as is practicable; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a preliminary JD constitutes agreement that all wetlands and other water bodies on the site affected in any way by that activity are jurisdictional waters of the United States, and precludes any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an approved JD or a preliminary JD, that JD will be processed as soon as is practicable. Further, an approved JD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331, and that in any administrative appeal, jurisdictional issues can be raised (see 33 C.F.R. 331.5(a)(2)). If, during that administrative appeal, it becomes necessary to make an official determination whether CWA jurisdiction exists over a site, or to provide an official delineation of jurisdictional waters on the site, the Corps will provide an approved JD to accomplish that result, as soon as is practicable.

This preliminary JD finds that there "*may be*" waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

SUPPORTING DATA. Data reviewed for preliminary JD (check all that apply -

checked items should be included in case file and, where checked and requested, appropriately reference sources below):

☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant:

Pike County, Item No. 12-1076.00

Stream name	Latitude	Longitude	Cowardin Class/Flow Regime	Estimated amount of aquatic resource in review area	Class of aquatic resource
Pond Ck. Reach 1	37.56547	82.26429	Perennial	449 linear feet	non-section 10 – non-wetland

High Gradient Stream Data Sheet

STREAM NAME: <i>Reach 1 (Assm't No. 3)</i>			LOCATION: <i>Old bridge site on Item No. 12-1079.00</i>		
STATION:		DRAINAGE AREA (AC) <i>- 5619</i>	BASIN/WATERSHED <i>Pond Creek</i>		
LAT: <i>37-33-55</i>		LONG: <i>82-15-51</i>	COUNTY: <i>Pike</i>		USGS 7.5 TOPO: <i>Belfry</i>
DATE: <i>06/08/09</i>		TIME: <input checked="" type="checkbox"/> AM <input type="checkbox"/> PM	INVESTIGATORS: <i>Rob Lewis</i>		
TYPE SAMPLE: <input type="checkbox"/> P-CHEM <input type="checkbox"/> Macroinvertebrate <input type="checkbox"/> FISH <input type="checkbox"/> BACT.					
WEATHER: Now Past 24 hours Has there been a heavy rain in the last 7 days?					
<input type="checkbox"/> <input type="checkbox"/> Heavy rain <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> <input type="checkbox"/> Steady rain Air temperature <i>85</i> °F. Inches rainfall in past 24 hours <i>0</i> in <input type="checkbox"/> <input type="checkbox"/> Intermittent showers <i>95</i> % Cloud Cover <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> Clear/sunny					
P-Chem: Temp (°F) <i>68.5</i> D.O. (mg/l) _____ % Saturation _____ pH(S.U.) _____ Cond. <i>674</i> <input type="checkbox"/> Grab					
INSTREAM WATERSHED FEATURES Stream Width EOW <i>10-20</i> ft Stream Width BF <i>20-40</i> ft Avg. BF Depth <i>5.0</i> ft Avg. current depth <i>0.5-3.0</i> ft Est. Reach Length <i>500</i> ft			LOCAL WATERSHED FEATURES: Predominant Surrounding Land Use: <input type="checkbox"/> Surface Mining <input type="checkbox"/> Construction <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Deep Mining <input type="checkbox"/> Commercial <input type="checkbox"/> Pasture/Grazing <input type="checkbox"/> Oil Wells <input type="checkbox"/> Industrial <input type="checkbox"/> Silviculture <input type="checkbox"/> Land Disposal <input type="checkbox"/> Row Crops <input checked="" type="checkbox"/> Urban Runoff/Storm Sewers		
Hydraulic Structures: <input type="checkbox"/> Dams <input checked="" type="checkbox"/> Bridge Abutments <input type="checkbox"/> Dry <input type="checkbox"/> Pooled <input type="checkbox"/> Low <input checked="" type="checkbox"/> Normal <input checked="" type="checkbox"/> Perennial <input type="checkbox"/> Intermittent <input type="checkbox"/> Island <input type="checkbox"/> Waterfalls <input type="checkbox"/> High <input type="checkbox"/> Very Rapid or Torrential <input type="checkbox"/> Ephemeral <input type="checkbox"/> Seep <input type="checkbox"/> Other <input type="checkbox"/> Culverts					
Riparian Vegetation: Dominate Type: <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Shrubs <i>Pine</i> <input checked="" type="checkbox"/> Grasses <input checked="" type="checkbox"/> Herbaceous <i>Locust</i> Number of Strata <i>4</i> <i>Sycamore</i> <i>Elm</i>		Dom. Tree/Shrub Taxa <i>Pine</i> <i>Locust</i> <i>Sycamore</i> <i>Elm</i>		Canopy Cover; <input checked="" type="checkbox"/> Fully Exposed (0-25%) <input type="checkbox"/> Partially Exposed (25-50%) <input type="checkbox"/> Partially Shaded (50-75%) <input type="checkbox"/> Fully Shaded (75-100%)	
Channel Alterations; <input type="checkbox"/> Dredging <input checked="" type="checkbox"/> Channelization <input type="checkbox"/> Full <input checked="" type="checkbox"/> Partial					
Substrate <input checked="" type="checkbox"/> Est. <input type="checkbox"/> P.C. Riffle <i>80</i> % Run _____ % Pool <i>20</i> %					
Silt/Clay (<0.06 mm)		40			
Sand (0.06-2 mm)		30		40	
Gravel (2-64 mm)		40		20	
Cobble (64-256 mm)		30			
Boulders (>256 mm)					
Bedrock					
Habitat		Condition Category			
Parameter	Optimal	Suboptimal	Marginal	Poor	
1. Epifaunal Substrate/Available Cover	Greater than 70% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are <u>not</u> new fall and <u>not</u> transient).	40-70% mix of stable habitat; well suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of new fall, but not yet prepared for colonization (may rate at high end of scale).	20-40% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 20-% stable habitat" lack of habitat is obvious; substrate unstable or lacking.	
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	
2. Embeddedness	Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment. Layering of cobble provides diversity of niche space.	Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment.	Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment.	Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment.	
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	
3. Velocity/Depth Regime	All four velocity/depth regimes present (slow-deep, slow-shallow, fast-deep, fast-shallow. Deep > 1.5 feet.	Only 3 of the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes)	Only 2 of the 4 habitat regimes present (if fast-shallow or slow shallow are missing, score low)	Dominated by 1 velocity/depth regime.	
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	

Reach 1

4. Sediment Deposition	Little or no enlargement of islands or point bars and less than 5% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 5-30% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 30-50% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
5. Channel Flow Status	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills > 75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
6. Channel Alteration	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr.) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40-80% of stream reach channelized and disrupted.	Banks shored with gabion of cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
7 Frequency of Riffles	Occurrence of riffles relatively frequent; spacing between riffles 5 to 7 stream widths. Variety of habitat is key. In streams where riffles are continuous, boulders or logs are important.	Occurrence of riffles infrequent; distance between riffles divided by stream width is between 7 to 15.	Occasional riffle or bend: bottom contours provide some habitat; distance between riffles divided by stream width is between 15 to 25.	Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by stream width is > than 25.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
8. Bank Stability	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	Moderately stable, infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable, 30-60% of bank in reach has areas of erosion, high erosion potential during floods.	Unstable, many eroded areas, "raw" areas frequently along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.
SCORE (LB)	Left Bank 10 9	8 7 6	5 4 3	2 1 0
SCORE (RB)	Right Bank 10 9	8 7 6	5 4 3	2 1 0
9. Vegetative Protection (score each bank)	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruptive of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.
SCORE (LB)	Left Bank 10 9	8 7 6	5 4 3	2 1 0
SCORE (RB)	Right Bank 10 9	8 7 6	5 4 3	2 1 0
10. Riparian Vegetative Zone Width (score each bank riparian zone).	Width of riparian zone > 18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riparian zone <6 meters; little or no riparian vegetation due to human activities.
SCORE (LB)	Left Bank 10 9	8 7 6	5 4 3	2 1 0
SCORE (RB)	Right Bank 10 9	8 7 6	5 4 3	2 1 0

Total Score

88

NOTES/COMMENTS; RR bridge recently washed away during a flood, but abutments remain.